



Can You Have It All?

Created by: Gretchen Hyde, Michelle Youngquist, and Jenifer Haley; Adapted from Project Wet	Date:
Subject: Social Studies/Math	Grade Level: 4 th
Time Required: 1 class period	Standards Reading: Craft and Structure: 6 Integration of Knowledge and Ideas: 7

Overview	Students will rank how they value land uses, and then use a graph to compare their rankings to the class.
Goal(s) & Objective(s)	Students will chart preference ratings of land uses, at 3 different levels- personal, group, and class. They will then order them from least to greatest and graph.
Materials	<ol style="list-style-type: none"> 1. Red, green, and blue markers for students & teacher 2. Overhead or projector of worksheets/graph 3. Copies of student handouts
Teaching Activities: <i>Instructional Approaches/Strategies</i>	<p>Introduction: Place the collage of pictures including off-road vehicle signs, wildlife, development, etc. on the overhead or other projector. Ask students which of these things look like something they would like to see more of in their area. You might want to talk about what the pictures show – wildlife, amusement park, livestock, motorized/non-motorized outdoor recreation, shopping.</p> <p>Procedures :</p> <ol style="list-style-type: none"> 1. Lead students into realizing that Idaho’s rangelands can and have been used for all of the things shown on the pictures. In this activity, they will be able to decide which uses are most important to them as individuals, a group, and a class. 2. Provide younger students with two copies of the individual ranking chart, the group ranking chart, and the student ranking graph. 3. Let students know that you will be first going through an example they need to complete, then they will be completing the activity on their own (optional – examples would do for older students). 4. Show the overhead of the individual ranking. Talk about what ranking means – listing preferences from least (1) to greatest (10). Show your “friends” ranking that you’ve decided on before class – an imaginary ranking different than yours. 5. Model a group ranking – show that the numbers will be added together to get a total score for each group, then the group’s numbers for each use need to be ranked (ordered) from one to ten like they would appear on a number line. 6. Finally, model a class’s scores and ranking. Show how each will look

	<p>on the graph.</p> <ol style="list-style-type: none"> 7. Have students complete their individual ranking at their seats. 8. Divide students into groups to add their scores and rank their findings. Each student should record the group's rankings in order to graph. Designate a place on the board for groups to record their scores for each category. Each group appoints a spokesperson to write the group's rankings on the board. Then, add the rankings. Students can then graph the three groups of results with three different colors of marker. <p>Closure: Students return to their seats and answer the questions. Discuss the answers.</p>
Assessment:	<p>Use the "Is it Sustainable" activity following the student worksheet to test student's understanding of the word sustainable. Or, have students complete the Problem Solving situation using new copies of the ranking worksheets provided without land uses listed.</p>

Background: About 48% of the land in Idaho is classified as rangeland. Rangelands include grasslands, shrublands, open forests, deserts, and any other land not covered by dense forests, rock, or concrete. Idaho's rangelands are very diverse, and mean different things to different people. How do you value rangeland? How do the people you know value rangeland? Students will discuss these questions after using a simple ranking activity.

This activity does involve differences of opinion – remind students to defer judgment and that there is no "right" answer on the ranking chart – every use has potentially negative and positive consequences. Students will first rank their personal preferences, so they are able to freely express their opinion. The rankings are added up for a total number of group points, so no individual is made to compromise to come up with a group answer.

Preparation: You may want to list your own or "a friends" rankings on an overhead of the rankings chart prior to the lesson, and likewise make up class or group rankings. Decide how you will group students before this activity.

Expansions and Modifications: Use the ranking activity in other situations that must involve making choices about preferred uses of a common resource.

Attachments:

- Can You Have it All Worksheet – 4 pages & Key
- Overhead Pictures
- Is it Sustainable Activity & Key

Name: _____

Can You Have It All?

About 48% of the land in Idaho is classified as rangeland. Rangelands include grasslands, shrublands, open forests, deserts, and any other land not covered by dense forests, rock, or concrete. Idaho's rangelands are very diverse, and mean different things to different people. How do you value rangeland? How do the people you know value rangeland?

Place the numbers 1-10 in the column labeled "Individual Ranking". These are the things you would want to see most from Idaho's Rangelands. Remember that:

Rank of 1 = **lowest** or **least** preferred
 Rank of 10 = **highest** or **most** preferred

So, if the **most** important thing to you is being able to snowmobile in the winter, you would put a 10 in the row labeled "Motorized Recreation". This is **your** opinion – there is no right or wrong answer.

<u>Land Use</u>	<u>Examples</u>	<u>Individual Ranking</u>
Wildlife Habitat	Elk, Deer, Birds, etc.	
Livestock Grazing	Sheep & Cattle ranching	
Native Plant Harvest	Collecting native seeds or herbs for medicine	
Hunting/Fishing	Access and places to hunt and fish	
Non-motorized recreation	Skiing, hiking, mountain biking	
Motorized recreation	Snowmobile, 4-wheeler, motorcycle	
Aesthetics	Natural, untouched beauty	
Rural Housing Development	Summer homes, ranchettes, lodges, cabins	
Agriculture	Farming, food production	
Urban Development	Golf courses, shopping malls, suburban homes	

<u>Land Use</u>	<u>Group Ranking</u>	<u>Class Ranking</u>
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	Total - Add Individuals	Rank	Total – Add Groups	Rank
Wildlife Habitat				
Livestock Grazing				
Native Plant Harvest				
Hunting/Fishing				
Non-motorized recreation				
Motorized recreation				
Aesthetics				
Rural Housing Development				
Agriculture				
Urban Development				

Student Ranking Graph

Name: _____ Date: _____

Key by Color Student = **RED** Group = **BLUE** Class = **GREEN**

Rankings	10										
	9										
	8										
	7										
	6										
	5										
	4										
	3										
	2										
	1										
		Wildlife Habitat	Livestock Grazing	Native Plant Harvest	Hunting & Fishing	Non-Motorized Recreation	Motorized Recreation	Aesthetics	Rural Housing Development	Agriculture	Urban Development

Questions

1. List 6 or 7 uses from the graph that could all happen in the same year on the same land.
2. List 2 or 3 uses that would prevent other uses from occurring on the same land.
3. Look up and define the word “sustainable”.
4. One way to think of sustainable use is use that leaves the land so that future people can easily use it for what they want. Based on these definitions, which uses can be sustainable if they are managed responsibly?
5. Were there any of your group’s or the class’s rankings that surprised you? Which ones?

Question KEY

1. List 6 or 7 uses from the graph that could all happen in the same year on the same land.
Wildlife Habitat, Livestock Grazing, Native plant harvest, hunting/fishing, non-motorized recreation, motorized recreation, aesthetics

2. List 2 or 3 uses that would prevent other uses from occurring on the same land.
Agriculture, Rural development, Urban development

3. Look up and define the word “sustainable”.
“The long-term maintenance of responsibility – involving environmental stewardship”
<http://en.wikipedia.org/wiki/Sustainability>

4. One way to think of sustainable use is use that leaves the land so that future people can easily use it for what they want. Based on these definitions, which uses can be sustainable if they are managed responsibly?

(answers will vary) – All uses could be sustainable if the soil is preserved, and native plants and animals have enough habitat to thrive in the area.

5. Were there any of your group’s or the class’s rankings that surprised you? Which ones?

(answers will vary)



Is it Sustainable?

Name _____

Decide whether each of the following activities would make a certain kind of land use **more sustainable**, or **less sustainable**.

1. Clustering houses in a rural subdivision to reduce the total number of roads.
2. Planting native plants on new roadsides to reduce erosion.
3. Making long driveways to rural houses to reduce noise from the highway.
4. A rancher fencing off a stream so that cattle cannot trample the plants on the bank.
5. Off Highway Vehicle (OHV) drivers placing water bars on trails to reduce erosion.
6. Bicyclists getting off of existing trails to make their own paths through the desert.
7. Allowing a horse to graze a large pasture until no grass is left.

Problem Solving

Come up with a location that you and your friends use for fun (such as a playground) that has some limited resources (shovels for sand, or swings). List up to ten different ways people can use the area. Write your own individual rank for each activity and have a group do the same. Then, add your group's scores and rank the total preference.

Is it Sustainable? **KEY**

Decide whether each of the following activities would make a certain kind of land use **more sustainable**, or **less sustainable**.

1. Clustering houses in a rural subdivision to reduce the total number of roads.
More sustainable – reduces impact on rangeland
2. Planting native plants on new roadsides to reduce erosion.
More sustainable – keeps soil in place
3. Making long driveways to rural houses to reduce noise from the highway.
Less sustainable – increased fragmentation of rangeland
4. A rancher fencing off a stream so that cattle cannot trample the plants on the bank.
More sustainable – keeps soil in place
5. Off Highway Vehicle (OHV) drivers placing water bars on trails to reduce erosion.
More sustainable – keeps soil in place
6. Bicyclists getting off of existing trails to make their own paths through the desert.
Less sustainable – increased erosion and disturbance to wildlife
7. Allowing a horse to graze a large pasture until no grass is left.
Less sustainable – increased erosion, increased invasive plants

Problem Solving

Come up with a location that you and your friends use for fun (such as a playground) that has some limited resources (shovels for sand, or swings). List up to ten different ways people can use the area. Write your own individual rank for each activity and have a group do the same. Then, add your group's scores and rank the total preference.